

## ABSTRACT

A preprocessing mechanism automatically processes a video sequence in order to obtain a set of views suitable for structure from motion (SaM) processing.

5 The preprocessor employs a frame decimation algorithm which removes redundant frames within the video sequence based on motion estimation between frames and a sharpness measure. The motion estimation can be performed either globally or locally. The preprocessor can be configured to process static video sequences (i.e., previously acquired/captured) to select a minimal subsequence of sharp views

10 form the video sequence, or to process the frames of a video sequence as they are being captured to discard frames which are redundant. In either configuration, the goal of the preprocessor is to select a minimal sequence of sharp views tailored for SaM processing.